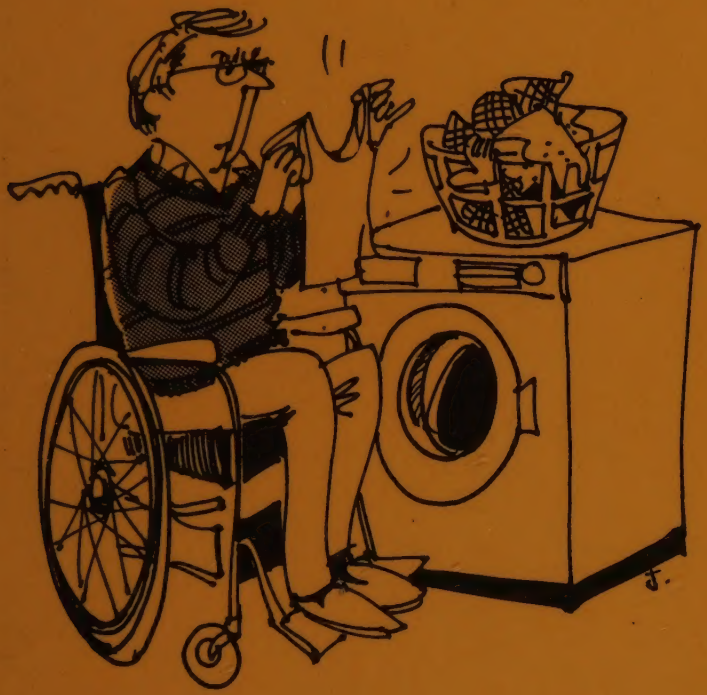
FabricWise

fabric choice for people with disabilities



Ginny Jenkins MCSP and Jane Lamb PhD

TT
648
J46

Brunel University

Library

Runnymede

WITHDRAWN

FabricWise

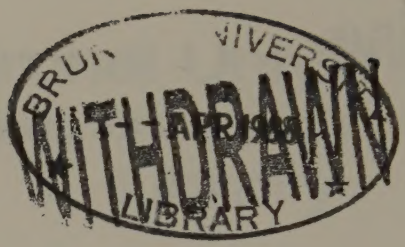
fabric choice for people with disabilities

Ginny Jenkins MCSP and Jane Lamb PhD

Cartoons by *Jean*

Published by
the Disabled Living Foundation

TT
648
J46



First published 1987

© The Disabled Living Foundation 1987

British Library Cataloguing in Publication Data
Jenkins, Ginny
FabricWise: fabric choice for people with disabilities.
1. Physically handicapped — Clothing 2. Textile fabrics
I. Title II. Lamb, Jane
III. Disabled Living Foundation
646'.31 TT648

ISBN 0-901908-49-5

Contents

		page
Acknowledgements		iv
Foreword		v
What influences clothes choice?		vi
1 Introduction		1
2 What fabrics are made of		2
3 Will the fabric meet my needs?		4
4 How easy is the fabric to care for?		20
5 Conclusion		26
6 Appendix I	Types of fibre and yarns, and fabric constructions	27
II	Useful addresses	36
III	Clothing Advisory Panel	37

Foreword

Anyone involved in making clothes will know the fundamental importance of getting the right fabric for the garment. Previous books on clothes and dressmaking for people with disabilities include details on the use of colour and design for maximum impact, but do not contain detailed information on the textile needs of a person with disabilities.

The Disabled Living Foundation has always been conscious that the clothing and dressing problems of people with disabilities do not receive the attention they deserve, bearing in mind the important part they play in everyday life. The DLF Trustees are therefore very grateful to William Low plc for the generous donation which has made it possible for this booklet to be written and published.

The Trustees would also like to thank Dr Jane Lamb for her contribution to the book during her sabbatical visit to the DLF in 1986.

As always, the DLF invites readers to make comments and constructive criticism on the text.

W M Hamilton

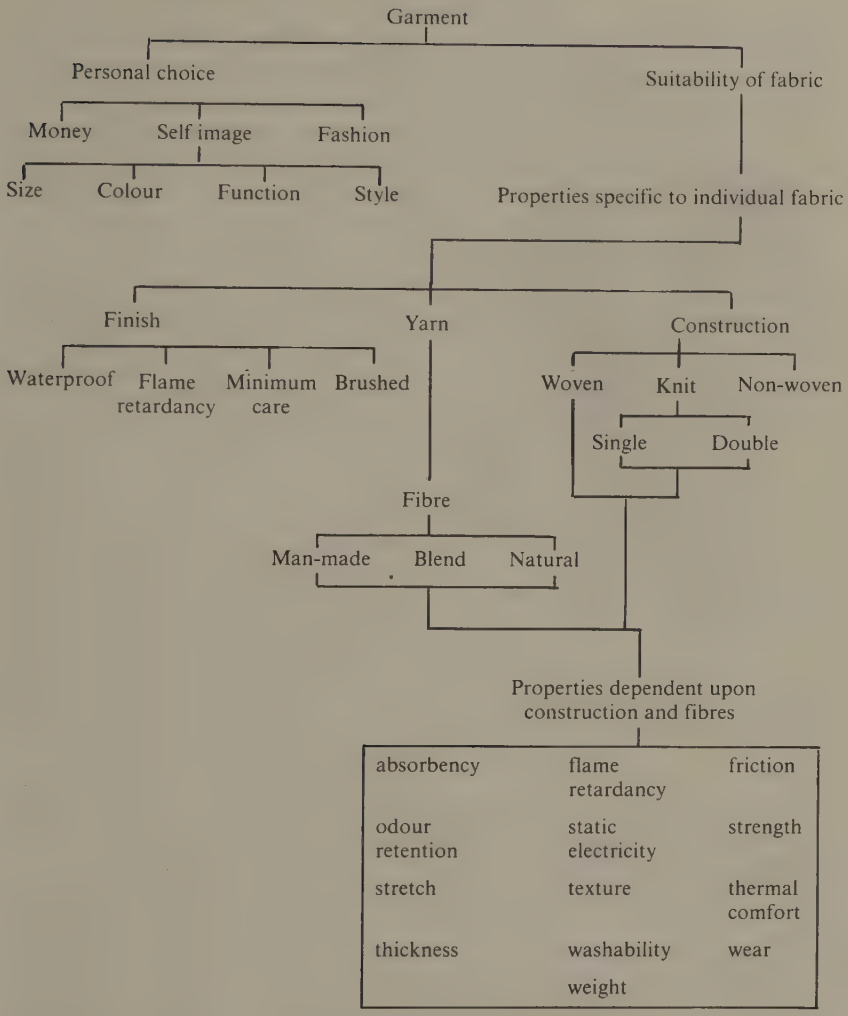
Acknowledgements

We are grateful to the members of the Clothing Advisory panel for their support and help, and would particularly like to thank Mrs Edna Mulligan, Mrs Caroline McCallion and Mrs Sue Wilkin for their technical assistance. We would also like to express our gratitude to Miss Elaine Clulow and other members of the Shirley Institute, Manchester, for their help and advice, and to Miss Cecily Ashcroft, MCSP, who, in sharing her personal experiences, gave us much insight and inspiration. Our grateful appreciation also goes to Ms Ruth Miller and Miss Lynne Smith for typing the manuscript.

The illustrations in Appendix I are reproduced with the kind permission of B T Batsford Ltd from *Textiles* by Edward Miller.

Ginny Jenkins and Jane Lamb

WHAT INFLUENCES CLOTHES CHOICE?



What influences us to choose clothes is a complex question. The left hand side of this chart lists the factors that decide whether a purchase is a success or not. For people with disabilities, the importance of the right hand section is even greater than for those who are able-bodied.

1 Introduction

Have you ever thought what influences you when choosing clothes? Most people give a lot of consideration to style, colour, design, pattern and price. However, it is only when they analyse why the purchase is a failure that they may realise that the fabric was unsuitable for their particular needs.

This booklet provides information on fabrics – how the fibres, yarn, weave and finish affect a fabric, and what you should look for when trying to establish the order of priorities between fabrics when choosing clothes.

An able-bodied person may be able to tolerate clothes made from fabrics which are less than comfortable, crease badly or need a lot of care. For the person with disabilities, any one of these drawbacks, discovered too late, may mean that the clothes are hardly worn.

"Choosing fabric, or ready-to-wear clothes, involves establishing a list of personal priorities."

Correctly chosen fabrics can help minimise some of the problems of people with disabilities; a wheelchair cushion covered in a fabric with a high pile or rough finish may contribute to sitting stability while one with a fabric surface which is smooth may make wheelchair transfers easier. Warm yet lightweight bedding can make sleep more comfortable and getting in and out of bed easier.

Choosing fabric or ready-to-wear clothes, involves establishing a list of personal priorities. Reading this booklet will help you to consider the relevant properties of a fabric when making your choice.

2 What fabrics are made of

Fibres

Most clothing fabrics are made of fibres which are spun into yarn and woven or knitted into cloth. The fibres are of two types – natural and man made. Natural fibres are either vegetable or animal. Man-made fibres are either of regenerated cellulose or made by synthesising chemicals.

Until about 100 years ago all fabrics were made from natural fibres. However, while natural fibres have many advantages, particularly with regard to comfort, fabrics made from them are not necessarily hard-wearing, easy to wash or cheap. In an attempt to overcome these disadvantages, man-made fibres were developed. These fibres, generally speaking, wear well and are easy to care for.

NATURAL FIBRES

General advantages	*General disadvantages*
Look and feel nice	Expensive
Comfortable	Not hardwearing
Absorbent	Difficult to care for
Easy to handle when sewing	Flammable
	Not very versatile
	Crease easily

MAN-MADE FIBRES

General advantages	*General disadvantages*
Cheap	May not feel nice
Hardwearing	May not be comfortable
Easy to care for	Low absorbency
Low flammability	Difficult to handle for sewing
Versatile – can be produced in many different forms	
Crease resistant	

But, as with any general classification, particular natural and man-made fibres may be exceptions to the general rule. For example, wool, a natural fibre, has low flammability, while acrylic and polyamide, both man-made fibres, are very flammable.

The complementary advantages and disadvantages have often resulted in natural and man-made fibres being blended together so that the advantageous properties of each complement the other. For example, in a polyester/cotton fabric, polyester adds strength and non-crease characteristics to the absorbency and coolness of cotton. A wool/polyamide combination adds the warmth and absorbency of wool to the non-shrink, hard-wearing characteristics of polyamide.

Yarn

Fibres have to be spun into a yarn before a fabric can be woven. The bulk and tightness of the spun yarn affect the type of fabric produced.

Fabric

Woven

Most clothing is made from woven fabrics. A woven fabric is defined as one where two series of yarns are interlaced at right angles. The actual way they are interlaced produces characteristic type of weaves each with its own particular features.

Knitted

Knitted fabrics are being used more and more, particularly for leisure clothing. A knitted fabric is inherently stretchy and is not likely to crease or fray.

Non-woven

An easily recognisable non-woven fabric is pressed felt. The introduction of non-woven interfacings, since the early 50s, some of which can be ironed onto the fabric, has made garment production much simpler and revolutionised the washability of many types of clothing. Before this, canvas interfacings were used which shrank if washed so that many garments, such as suit jackets and coats, always had to be dry cleaned.

(See Appendix I for further details of fibres, yarns and fabric constructions, properties of fibre mixes, generic and brand names of fibres.)

3 Will the fabric meet my needs?

Wear/durability

Clothes that wear out very quickly can be a major cause of expense and concern to their owner. The exposure of one part of the garment to additional or unusually hard wear may account for this lack of durability.

The problem may be caused by an unusual gait in which, for example, knees or shins rub together, or by the disabled child or adult moving about on their bottoms or by crawling.

Calipers, braces and artificial limbs have a nasty habit of causing holes in garments where the jointing mechanisms catch, or where there is excessive wear of clothes directly over them.

Propelling wheelchairs or using crutches wears out the inside of sleeves and cuffs or under the arm.

Pre-patching either the outside or inside of new garments may be a sensible step and more acceptable but choosing appropriate fabric will also substantially prolong the wear.

General points

1. *Fibre* Man-made fibres are harder wearing than natural ones. Polyamide and polyester which are man-made fibres are particularly hard-wearing while cotton, wool and viscose, all fibres from natural sources, have less durability, strength or resistance to abrasion.

2. *Yarn* The strength of the yarn will also affect the durability. Simple plain yarns wear much better than fancy ones with slubs or loops or ones which are of irregular thickness, because they are spun more tightly.

3. *Weave* A close weave, especially of the drill type like denim, is very hard wearing. The closer the warp and weft yarns are, the harder the wear.

Loosely woven or knitted fabrics will not wear well. These fabrics are also prone to snagging and breaking of individual threads resulting in pulled threads and holes in woven fabrics or runs (ladders) in knitted fabrics.

Pile fabrics, towelling, corduroy or velvet, will only wear as well as the basic weave of the fabric (see p.33).

Fabrics

A close plain weave of 100% man-made fibres can be very unpleasant and rigid to wear. A similar fabric of 100% natural fibres, however, will not be as durable. To overcome these problems natural fibres are mixed with a percentage of man-made fibres eg:

cotton/polyamide	socks
polyester/cotton	shirts
wool/polyester	trousers
wool/polyamide	socks

Durable fabrics

Woven, plain or twill	100% natural fibre, wool/polyester mix – the more polyester the harder the wear
Denim	75% cotton 25% polyester is harder wearing than 100% cotton
Corduroy (close woven)	75% cotton 25% polyester is harder wearing than 100% cotton

Any fabric with 2 to 4% elastane fibre incorporated will wear better than a similar fabric without because the degree of elasticity will give the fabric 'comfort stretch'. This allows a fabric to stretch at stress points in the garment so that the yarn does not break or a seam split. Trousers, the clothes most often made of a fabric with small amounts of elastane in it, are often labelled 'comfort stretch'.

Pilling The formation of small balls on a fabric surface where the wear is caused by rubbing – fibres break and then become trapped in balls on the fabric surface, rather than just wearing off.

Finishes which reduce durability

Any 'Minimum Care Finishes' (produced by chemically treating fibres) will reduce a fabric's tear strength and abrasion resistance, and so reduce its wear.

Absorbency

An absorbent fabric may be needed:

to ensure adequate and fast drying of someone with disabilities who may quickly become cold or clammy;

to ensure safety when cooking or handling hot liquids, particularly when the cook is sitting down. Aprons or protective clothing should be thick and absorbent to minimise the chance of spills reaching the skin and so reduce the severity of scalds (as liquid is absorbed it cools although it also spreads);

because a body brace, artificial limb or other surgical appliance fits closely and causes excessive sweating, resulting in areas of chafing if this moisture is not absorbed;

because sitting for long periods, when it is hot, can cause extreme discomfort – in summer, on holiday or in a warm room – particularly if the chair is covered with a non-absorbent material;

because, as a result of the disability, there may be severe sweating;

because dribbling and spills of food or drink while feeding need to be absorbed quickly by bibs or protective clothes.

General points

1. Natural fibres are absorbent; however, when saturated they tend to be as cold, clammy and uncomfortable as any others.

2. Of regenerated cellulose fibres, only viscose and modal are absorbent. Acetate and Triacetate will not absorb moisture because of the way they are made.

3. Synthetics are much less absorbent.

Up to 25% of a synthetic fibre can be added to a natural fibre without significantly altering the fabric's absorbency.

Anyone with a severe sweating problem will need to find out by trial and error what is tolerable. Some people may be able to tolerate a mix as high as 50/50; others none at all. For comfort, it is not only a question of how well the fabric absorbs the liquid but how quickly it allows it to evaporate; therefore, when choosing a fabric for its absorbency, the prospective wearer must decide if the garment will continue to be worn while wet or will immediately be removed. For instance, a fabric used for a towel for drying after a bath does not need to allow moisture to evaporate as it is immediately put aside, whereas one for a vest does.

Absorbent fabrics which also encourage evaporation

1. Loose weaves or knits are better than close ones.

2. Thick, loosely spun yarns are more absorbent than thin, closely spun yarns.

3. Thin fabrics are better than thick.

Absorbent fabrics which may be slow to dry

Looped fabrics, eg towelling and those with brushed finishes, absorb more liquid than plain ones because of their greater surface area.

Suggested fabrics

Cotton Cotton/Modal mix	Single knit towelling
Modal Cotton/synthetic (small %)	Loose – light to medium weight weaves
Wool	Lightweight knit or weave

Wicking Because man-made fibres have low moisture absorbency they can be used to allow moisture to pass straight through a fabric onto an absorbent layer or else to evaporate into the air. This process is called wicking. It occurs most readily through a knitted man-made fabric and where there is some pressure on the outer surface of the fabric, ie that away from the origin of the moisture. Probably the most easily recognised example of wicking is the use of 'Marathon' or 'Ever-Dri' nappy liner. This is a piece of 100% knitted polyester fabric which is used between the skin and the terry nappy and allows the urine to pass straight through the liner to the nappy behind. Wicking explains why people who sit on a non absorbent (PVC type) seat wearing a knitted man-made fabric will find the seat is wet if they have been sweating.

Safety note Perhaps it is wiser not to wear knitted polyester fabrics if there is a danger of spilling hot liquid, as these fabrics will allow the liquid to pass straight through to the skin.

Waterproof/Water Repellent

To prevent liquid reaching the skin or passing from the skin to the air, a waterproof fabric is necessary. While it is more frequently a requirement of outdoor clothes, this property may also be needed to protect clothes or skin from incontinence, liquid spills or dribbling. It must always be remembered that a waterproof/water repellent garment is only as good as its seams and fastenings allow it to be.

Waterproof fabrics

A fabric will only be completely waterproof if there are no holes between the warp and the weft to allow water to pass through. This means that they must be blocked by a completely impervious coating such as plastic, rubber or polyurethane.

Clothes made from completely waterproof materials will not usually

"Waterproof garments are only as good as their seams."

breathe, with the result that they make the wearer feel hot and sweaty. They are also difficult to clean, in the sense that, being impervious to water, they cannot easily be washed.

Breathable waterproof fabric

Several types of fabric are now available which are waterproof but not impervious. Perhaps the best known is 'Gore-Tex', which has a three layer construction with a layer of PTFE film laminated in the centre between two other types of fabric. The holes are too small to allow the passage of water droplets but so numerous that water when turned into vapour can easily pass through. Easier to wash than traditional waterproofed fabrics, they are often expensive and may only be available as commercially made garments.

Water repellent fabrics

General points

1. *Fibres* Man-made fibres are water repellent.

2. *Yarn* Hard twisted yarns are water repellent.

3. *Weave* Very closely woven fabrics in fibres of low absorbency will repel water because the weave makes it more difficult for water to penetrate. However, once wetted, they become very heavy and will take a long time to dry.

4. *Finishes* Silicone and fluorocarbon finishes can be applied to make a fabric water repellent. The finish is impregnated into a closely woven fabric, so that its ability to repel water is improved. However, the finish will be removed if the fabric is incorrectly washed and especially if it is dry-cleaned.

Suggested fabrics for water repellence

Polyester/cotton	poplin	All with a water repellent finish
Wool, Wool/polyester	gabardine	
Polyamide	woven	
Cotton, Cotton/polyester	denim, canvas	

Flammability/flame resistance

There is much concern about the fire risks to which disabled people are exposed.

The fabric which will not burn, ie a non-flammable fabric, does not exist. It will either smoulder, or flare and burn up its length, or melt. The least flammable fabrics are those which smoulder for a long time or burn or melt away from the flame source so that they are no longer in contact with it.

Fabrics which smoulder or burn very slowly may produce noxious fumes.

Clothes may catch fire when being worn if:

a sleeve catches light when the wearer is cooking;
the wearer is too near to, or falls onto, an unguarded fire;
the surroundings are alight;
lighted cigarettes or matches are dropped onto clothes, or half extinguished ones or pipes are put into pockets.

Clothing is quite difficult to ignite from a cigarette just lying in contact with it, as can happen when a cigarette falls out of someone's mouth. The body's movements, even from breathing, are usually sufficient to stop a cigarette lying in one place for long enough for fire to gain hold. A hole is the usual

result. The most common fabric/cigarette fire happens when the lit cigarette drops onto a chair and smoulders for some time in one place before igniting the cover. When choosing a fabric and considering its flammability, you must first decide how likely it is that the fabric will be exposed to these circumstances, and also take into account the wearer's ability to recognise danger and put out a fire on clothing should it occur. In institutional care, and especially where clothes are stored communally, a higher degree of flame resistance may be required, to reduce the risk of fires gaining hold among the clothes.

General points

1. Untreated cotton silk, and regenerated cellulose fibres burn quickly and flare freely.

2. Wool will smoulder.

3. Synthetic fibres may melt or burn slowly without flaring. Some, particularly polyamide, will disintegrate in flaming molten droplets which stick to the skin causing severe local burns. Acrylic fabrics can burn explosively.

4. Mixes of man-made and natural fibres will burn more quickly than *either* of the component fibres.

5. Fabrics which are brushed or have a pile will burn more freely.

6. Loose open weaves burn more quickly than close weaves.

7. The sewing thread or other trimmings used for the garment should have the same flame retardant qualities as (or better than) the fabric, otherwise fire may run up the seams.

Safety note

The effect of the fire on the wearer also depends to a large extent on the style of the garment. Garments with a lot of loose material will catch fire more easily and burn faster than those that are close-fitting. It also depends on the other clothes being worn and what they are made of.

The flammability of any fabric will be increased if its surface becomes coated with a substance which will permit or encourage the spread of fire.

Products commonly used in washing which can coat the fibres and have this effect are:

fabric softener
starch
soap based powders.

The build-up of these products on fabrics is most common in hard water areas where more of the substance is used and it is difficult to remove the residue by rinsing. This problem obviously becomes greater the more often a fabric is washed.

Low flammability fibres

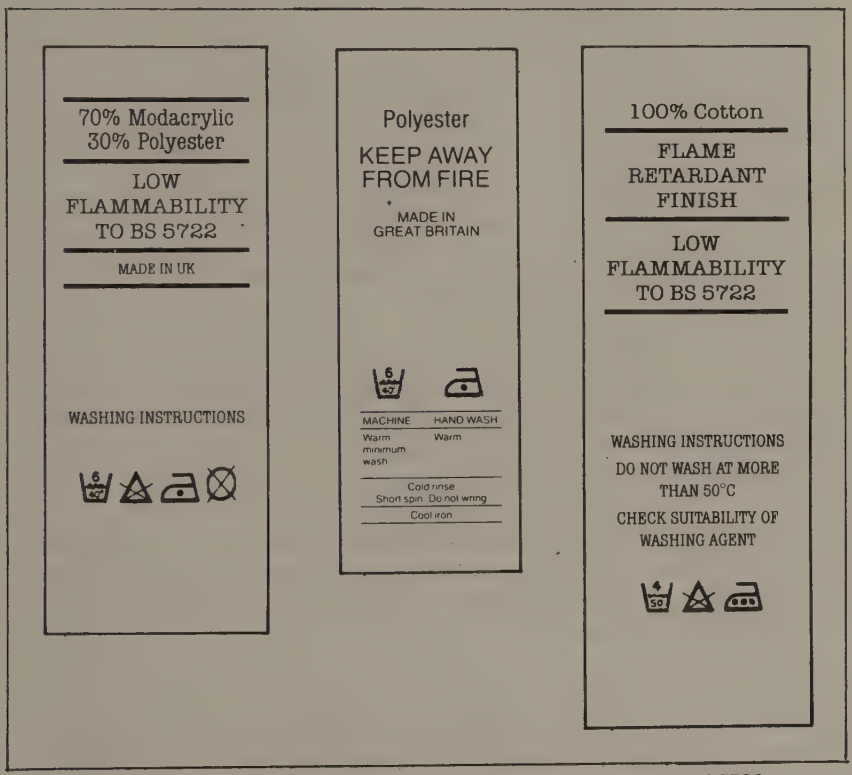
Modacrylic
Polyester
Chlorofibre – does not burn but 'melts' at 'low' temperatures
Wool – may even self extinguish.

Yarn Thick yarns catch fire less readily.

Weave Close, thick weaves inhibit flame spread. Some knits, particularly double and thick fancy knits, inhibit flame spread.

Ways of making fabrics more flame retardant

Finishes Flame retardant finishes, eg Proban or Pyrovatex, can be applied to any fabric and reduce its flammability. They are used particularly with cotton. However, they may make a fabric harsher to touch and need special wash care. They may be affected by washing powder, fabric softeners and



Nightwear labels conforming to the labelling requirements of BS5722.

be removed by hypochlorite bleach. The flame retardant finish may not be guaranteed to be effective for more than 200 washes.

Fibres Fibres can be modified early in the manufacturing process to increase their flame retardant qualities. Because it is a modification of the fibre and not of the fabric it will last throughout the lifetime of the garment. It is an expensive way to lower flammability and clothes made from these fabrics are not readily available in the UK. Garments manufactured using flame retardant fabrics made from modified fibres will be labelled as such.

Flammability regulations

The only domestic clothing flammability regulations in the United Kingdom are the Nightwear Safety Regulations (1985) which enforce the British Standard 5722. All children's nightwear must be made of a fabric which conforms to this standard and *burns less than 250 mm (10 inches) in 30 seconds and – 500 mm (20 inches) in 1 minute*. The fabric which usually conforms to this is 100% polyester (and all polyester fabric used for children's nightwear does). However, not all 100% polyester material sold conforms to BS 5722.

These regulations do not apply to adults' nightwear or dressing-gowns.

The labels on fabrics used for nightwear must now state whether the fabric conforms to these regulations or not; if they do not conform, the label must state 'keep away from fire'.

Static

Static is generated by friction where two layers of fabric are in contact. The amount of static produced depends on the amount of friction between the layers and also on the fabrics concerned. Static can be generated between clothing and seats, and clothing and body braces, particularly if the seat is of PVC and the brace polyurethane.

As clothes cling on movement, it might be thought that static electricity would not present quite such a problem to the disabled person with restricted movement as it does to the able-bodied person. However, the degree of static in the atmosphere depends on how dry the air is – the atmosphere in hospitals and residential homes is often very dry. A build-up of static attracts dirt particles to garments. If static builds up on clothing and the disabled wearer is insulated by shoes, wheelchair wheels or rubber tips of walking frames, the charge will earth through any other person who touches the wearer. Quite literally, he is not nice to touch!

Fibres

Synthetic (non-absorbent) fibres are especially prone to static build-up because they are non-conductors of electricity.

Natural fibres are less likely to produce static.

"Quite literally, he is not nice to touch!"

Fabrics

A fabric of a synthetic/natural blend will have a lesser risk of static build-up than one made of pure synthetic fibre. A proportion of at least 35% of natural fibre is required to achieve this benefit.

Finishes which produce anti-static fabrics

These finishes are used to produce some degree of moisture absorption on the surface of the fabric. An example is Permalose TG (ICI) for polyester and blend fabrics.

Fabric softeners

These are designed to reduce static build-up on clothes and are useful if the problem is a serious one. However, fabric softeners themselves build up on fibres and can weaken them. It should always be remembered that this build-up will also affect flame retardancy (see page 10).

Texture

The texture of a fabric is important because it can contribute significantly to the pleasure clothes give; and the surface textures of a garment may be of particular importance to a disabled person. For instance, a fabric with a slippery surface may be easier to put on, while one with a rough or high pile surface may encourage a good sitting posture since it will produce a higher degree of friction between the individual and the chair than one with a slippery surface.

General points

The texture of a fabric is achieved by the blend of the yarn, weave and/or finish.

1. *Yarn* Filament yarn is a thin smooth and shiny yarn. Staple yarn is thick, fibrous and matt. The thickness of the yarn has a significant effect on the texture. Fine yarns weave into light fabrics such as lawn or crepe de chine.

Thick fibrous yarns produce heavy or coarse fabrics like tweed. Fancy yarns – loops, curls and slubs – make a fabric more interesting but will catch, pull and may wear unevenly. Crimped or bulked yarns may make a fabric feel better and thicker but will also snag more easily and, if the yarn is a long filament one, a long pulled thread may result, damaging the cloth badly.

2. *Weave* The weave plays a major part in texture.

Satin weaves give the smoothest, most slippery and flattest surface.

Pile weaves produce a dense, upright, fibrous surface; they will always produce a higher degree of friction than a plain weave and this friction is further increased if the weave is looped (terry cloth) or cut (corduroy).

3. *Knits* Warp knits of filament yarns, eg polyamide, polyester, acetate and viscose, produce a fine compact fabric which is pleasant to handle and quite slippery. This type of fabric is used for lingerie.

4. *Finishes* Brushing produces a napped (raised) fibre surface which clings, eg flannel, flannelette, brushed polyamide.

Suggested fabrics

1. *For slip/smoothness:*
satin: the degree of slip will depend on the fibre the satin is made of;
plain weaves of filament yarns, eg silk, polyamide, polyester, viscose;
closely knitted fabrics of a synthetic filament yarn.

2. *For friction:*
piled weave
rough weave

textured weave
corduroy
towelling
velvet.

Elasticity/stretch

Elasticity is a property of the fibre, while stretch is one of the weave. Use of an elastic fibre in a stretch weave maximises these characteristics. Use of a non-elastic fibre in a firm weave minimises them.

The ease with which a garment can be put on and the way it looks when worn are affected to a large extent by the elasticity and stretch of the fabric.

Elasticity and stretch also affect the acceptable life of a garment. No one likes wearing clothes which no longer retain their shape because they have become baggy.

Skirts and trousers which have 'seated' and stretched at the knee as a result of sitting are very demoralising for the wearer when walking about.

General points

1. *Fibre* All fibres lengthen a certain amount under tension and when they are wet. Those with inherent elasticity regain their shape after the stress is removed or after washing. Those without such elasticity either remain lengthened or, in time, break.

Some fibres are inherently very elastic: Elastane can extend by 500-800% and still 'snap back'. The elasticity of others, like wool, silk, polypropylene, polyamide, acrylic and modacrylic, is much less.

2. *Yarn* A yarn which has been 'crimped' or textured is able to stretch and then return to its original form. The 'crimp' enables it to stretch and also to return to its original shape.

3. *Fabrics* While knitted fabrics, particularly single weave knits, will stretch more than woven ones, they can more easily become permanently baggy. Warp knits are firmer than weft knits.

The degree to which a fabric will stretch really does depend on the combination of fibre, yarn and weave. The addition of elastane fibre to a fabric will enable it to

The baggy look!

stretch but this is not necessarily in direct proportion to the amount added.

Comfort stretch

The 2-4% elastane sometimes added to some denim, corduroy and worsted weaves produces just sufficient 'give' to permit a close fit without the seams being unduly strained.

Power stretch

When high percentages of elastanes are used in foundation garments and swimsuits real support for body tissues is provided. The higher the proportion of elastane the greater the control.

Thermal comfort

1. Warmth

A fabric which provides warmth may be necessary because someone:

is less mobile, making it less practical to keep warm by moving about;

has poor general circulation so that the cold is felt more intensely (when the atmosphere is warm blood vessels dilate making circulation easier);

has poor peripheral circulation – if the body is as warm as possible this helps the extremities to keep warm.

General points

1. Fabric does not itself generate warmth. It keeps us warm by trapping a layer or layers of still air which is then warmed by body heat.
2. Several layers of thin fabric, loosely fitting, may therefore provide more warmth than one thick layer because of air trapped between each of the layers.
3. If the layers are too tight they will squeeze out the layers of air completely and, if they are too loose, they will fail to retain the warmed air.
4. The efficiency of the insulation a fabric gives is in direct proportion to its thickness. A fabric twice the thickness of another of identical construction and fibre will give twice the insulation.
5. As a fabric gets older, it will become less efficient at retaining warmth because it becomes compressed and so relatively thinner. Garments which are several years old cannot therefore be expected to be as warm as when they were first bought.
6. Quilted fabrics, because they are really several separate layers held apart by a filling of fibres, provide a great deal of warmth. *However*, some fibres used as fillers will compress relatively quickly, becoming thinner and so less efficient.

Fibre Some fibres naturally feed warm, for example wool, acrylic and polyester. Fibres which provide warmth are those which entrap air and resist compression enabling a fabric to retain its original thickness, for example wool, polyester, chlorofibre and acrylic. The fibre which provides the most warmth is one which also has a low density; this enables a fabric to be thick without being heavy.

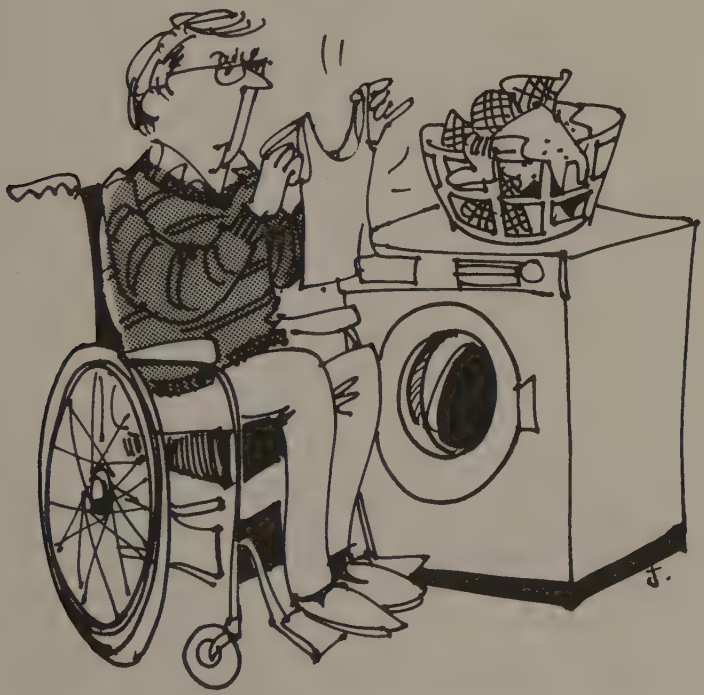
Yarn Loosely spun yarns enable air to be trapped between the fibres.

Weave A thick yarn in a loose knit will provide warmth because of the air trapped in the spaces. A tight close weave will prevent warm air from being lost particularly when outside in the wind.

Finishes A brushed or napped finish will make any fabric warmer because it increases its bulk and entraps air.

Thermal clothing

In recent years shops have started labelling underwear, nightwear, socks and stockings as 'thermal'. While chlorofibre (thermolactyl) has been



". . . or it will shrink considerably"

shown in tests to produce a fabric that keeps people warmer than others of the same weight and thickness, it is a PVC fabric and needs careful washing and drying at the recommended temperature or it will shrink considerably.

As has been mentioned previously, tests have shown that the warmth provided by a fabric is directly proportional to its thickness. Many manufacturers who label garments as 'thermal' are merely indicating that they are thicker than others in their own range.

Chill factor

This is the effect of cold air moving across skin and cooling it much more than might be expected from the air temperature recorded on a thermometer. It is usually recognised as a problem for people moving fast in cold air, eg motor cyclists and skiers; however, people with disabilities are susceptible to the chill factor because, being slow-moving, they are less able to shelter from cold winds.

To minimise the chilling effect of wind, a fabric used in the outer layer of clothing will need to be very closely woven of tightly spun yarn. The gap between warp and weft should be filled completely in some way or made as small as possible. Fabrics which are waterproof/water repellent offer effective protection from chill factor (see page 7).

2. Coolness

While some people need fabrics for warmth, others need to keep themselves cool. This may be necessary because:

they constantly feel too warm;
they live in a very warm environment;
they are unable to move about easily to 'cool off' in warm weather or get out of the sun.

Fibres Some fibres, cotton, and regenerated cellulose fibres, eg viscose and modal, naturally feel cool.

Yarn Smooth filament yarns feel cool because they do not entrap air. Thin yarns feel cooler than thick for the same reason. Closely spun yarns feel cooler than loosely spun ones.

Weave Loose weaves and fine open knits allow free passage of air.

Fabrics – 100% cotton
Cotton/modal mixes
Modal
Viscose.

Weight

The weight of a fabric may be very important because:

sensitive or painful skin may not tolerate anything heavy next to it;
heavy garments make movement difficult for someone with weak muscles or restricted/painful joints;
heavy garments are difficult to put on particularly for someone with weak muscles or restricted/painful joints.

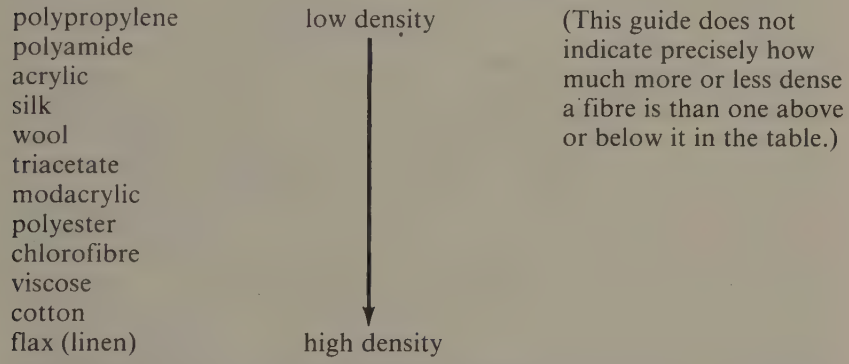
General points

1. The weight of a fabric depends on both the strength and the density of its fibres.
2. The stronger the fibre, the finer the yarn which can be made and so the lighter the fabric. Fibres which are strong include silk, cotton, polyamide and polyester. Very fine fabrics can be made from these.

Effect of density

The density of the fibre determines how heavy a fabric feels compared to an identically constructed fabric in another fibre. It is calculated by dividing the weight of a given fibre by its volume.

The following list shows the order of densities from the lowest to the highest:



This explains why an acrylic garment is lighter than a wool one and why cotton cloth is lighter than linen, although the fabrics appear identical. Two fibres may have been mixed together in a fabric, maybe partly to alter the weight of the final fabric. By referring to the table you will be able to tell whether a mix will be lighter or heavier; for example cotton/polyamide mixes used in socks are heavier than polyamide but lighter than cotton – the relative degree depending on the percentage of the mix; wool/polyester, used in trousers and suitings, is lighter than polyester but heavier than wool in identically constructed fabrics.

4 How easy is the fabric to care for?

Ease of care may well be just as important as, or even more than, a fabric's ability to meet the wearer's other requirements. Most of us have clothes in our wardrobe which are worn infrequently because they are not as easy as others to care for – perhaps a dress that requires a lot of ironing or a jumper that cannot be washed and easily dried. For a person with disabilities the result may be that the garment is hardly worn at all.

Washing

1. Frequency

Clothes may need to be washed more frequently because:

the wearer cannot walk – wheelchairs can make sleeves very grubby and crawling or bottom shuffling makes knees or trouser seats very dirty;

dribbling or dropping food or liquid may cause staining;

episodes of incontinence may make clothes wet or soiled;

living in a hot dry atmosphere may create such a need (see static p. 12);

everyone's clothes need regular cleaning to prevent dirt from becoming deeply ingrained in the fabric. Dirt which does become ingrained will abrade the yarn and decrease the wearing life of the fabric. Clothes which are going to need frequent washing, should be chosen with this in mind.

Sometimes people feel that they are allergic to a particular fabric. It is possible to be allergic to anything, and allergic reactions have been observed to result from most fibres, some dyes and finishes and some garment trimmings. However, the commonest causes of allergic reaction related to clothes are washing powders, particularly biological ones.

Yarn Closely spun staple yarns wash better than loosely spun yarns; filament yarns also wash well.

Weave Closely woven plain fabrics and jersey double knits wash and keep their shape better than open weaves and single knits.

Fabrics Those made from man-made fibres wash well.

Finishes The majority of fabric finishes are designed to improve the fabric's care qualities. Such fabrics will be labelled, for example: 'Minimum

Wash/Care Codes: Comparative Chart

Old symbol	New symbol	Accompanying wording	Washing temperature Machine Hand	Examples
		'Wash in cotton cycle' or 'Wash in cotton programme' or 'Wash as cotton'	very hot 95°C hand hot 50°C *normal action, rinse and spin*	White cotton and linen without special finishes.
		'Wash in cotton cycle' or 'Wash in cotton programme' or 'Wash as cotton'	hot 60°C hand hot 50°C *normal action, rinse and spin*	Cotton, linen or viscose without special finishes where colours are fast at 60°C.
		'Wash in synthetics cycle' or 'Wash in synthetics programme' or 'Wash as synthetics'	Hand hot 50°C *reduced action, cold rinse, reduced spin or drip dry*	Nylon, polyester/cotton mixtures, polyester, cotton and viscose with special finishes; cotton/ acrylic mixtures.
		'Wash in cotton cycle' or 'Wash in cotton programme' or 'Wash as cotton'	Warm 40°C *normal action, rinse and spin*	Cotton, linen and viscose where colours are fast at 40°C, but not at 60°C.
		'Wash as synthetics cycle' or 'Wash in synthetics programme' or 'Wash as synthetics'.	Warm 40°C *reduced action, cold rinse reduced spin*	Acrylics, acetate and triacetate including mixtures with wool; polyester/wool blends.
		'Wash in wool cycle' or 'Wash in wool programme' or 'Wash as wool'	Warm 40°C *much reduced action normal rinse and spin (don't hand wring)*	Wool, wool mixed with other fibres; silk.
		Hand Wash		
		DO NOT WASH		

Care'; 'Machine Washable Wool'. However, unless they have been achieved as a fibre modification in manufacture these finishes will deteriorate with age. Something which is 'Minimum care' when purchased may after a relatively short period require as much care as anything else after two or three years.

Wash/Care Codes

All garments are labelled with wash care symbols which have recently been altered and simplified.

Garments sold in shops will be labelled with the revised system from 1987. However, for some time to come clothes with both types of labelling on them will remain in shops and in our wardrobes. When choosing a garment with washing needs in mind, the purchaser should consider not just the frequency of washing but who will do the washing and how the garment will be dried.

2. Who does the washing?

The wearer At least someone who washes their own clothes has full control over the way the washing is managed. Wet washing is heavy, awkward to handle and to wring out, and all the clothes of anyone who is disabled may need to be machine washable. Someone who lives alone may find it more convenient to choose clothes which come within a narrow range of wash care symbols to ensure the most economic use of the washing machine. However, anyone who also does washing for others can, by carefully dividing the washing into loads, wash clothes comprising a greater variety of fabrics and still use the machine economically. The wash programme with the gentlest action and the lowest temperature required by any individual item in the load is the one which should always be used.

Carers at home The same considerations apply as in the preceding paragraph. However, if the carer can undertake it, handwashing becomes a viable option. It may be considerate to enquire how much the carer likes washing and how much time he or she chooses to devote to it.

Institutional care Great progress has been made in improving laundry facilities in institutional care. However, due to the purchaser's lack of knowledge of a particular system, or the way a particular hospital or home does its washing, many clothes continue to be damaged.

Even in those establishments where the laundry equipment is designed for personal clothing, the laundry staff are required to get through the work within a given time and it may be difficult for them to handwash or sort clothes out into different wash temperatures and spin programmes. It is sensible to realise this when choosing fabrics and perhaps wiser to choose clothes which do not require washing on a more delicate programme than

Drying

Even if the wearer does his own washing, or that of others, tumble drying or some other form of drying by artificial heat may be necessary. If other people do the washing, tumble drying may also be used. In institutional care, clothing will either be tumble or tunnel dried. (In tunnel drying, hot

". . . and the garment may lose its shape . . ."

air is blown over the garments which are on hangers.) Tunnel drying does not heat distort fibres in the same way that tumble drying may.

Do not buy garments carrying this label if clothes cannot be dried naturally. Tumble drying a fabric with this label on it will result in damage to the *fibre* of the garment.

Chlorofibre (Thermolactyl) and Polypropylene fibres will shrink dramatically if tumble dried.

Acrylic fibres may become badly distorted and the garment lose its shape if tumble dried.

Do not tumble dry *Reshape while damp/ dry flat*	Garments with the printed words 'Do not tumble dry' will lose shape if tumble dried. It may be unwise therefore to buy clothes with this warning or the variation 'Reshape while damp/dry flat' if they are likely to be tumble dried.

In certain large communal laundries, tunnel drying is used. It is usually safe to dry clothes labelled 'Do not tumble dry' by this method (Chlorofibre remains an exception). However, check that the owner of the clothes is

unlikely to be moved to an establishment which relies on tumble driers or that the existing laundry is planning to alter its system in the near future!

Dry cleaning

This is essential when washing in water would seriously distort a whole garment or one section of it. It is an expensive method of cleaning clothes and is not particularly effective at removing odours from fabrics (see 'Odour retention' page 25).

These are the common dry cleaning symbols. The capital letter indicates to the cleaner the appropriate solvent to use.

Do not dry clean. This is found particularly on rubberised/ cotton or PVC coated fabrics where dry cleaning will damage fabric.

Pressing/ironing

Ironing is an awkward, time consuming task. Washing machines have taken much of the effort out of washing but ironing remains something which, if not skilfully done, puts more creases in than it takes out!

The temperature at which a garment is ironed is important as certain fibres are very heat sensitive.

Natural cellulose fibres, eg cotton and linen, are very heat tolerant.

Modal, viscose, silk and wool are moderately sensitive.

Man made fibres, eg polyamides and polyesters, acetate and triacetate, are very sensitive to heat and must be ironed on a low heat setting.

Acrylic and polypropylene fibres are even more sensitive, and chlorofibre fibres must not be ironed.

The amount of ironing required can be reduced by choosing fabrics which have a natural crease shedding ability, by drip-drying, and by using the minimum amount of spin or tumble drying and carefully folding the garment as soon as it is dry and cool.

Fibres which do not crease easily are polyester and polyamides. However, if these fibres are washed at too high temperatures, the fabrics will crease seriously. These creases then become difficult to remove.

Knitted fabrics do not crease easily.

Viscose fabrics crease easily when wet but are easy to iron if ironed while damp.

"Ironing, if not skilfully done . . ."

Odour retention

A fabric may smell even when clean either because it has not been washed well enough, or because certain fibres become, in time, chemically altered and impregnated by smells. This may be of concern if an individual sweats a lot, uses certain ointments for skin conditions or is incontinent of urine or faeces. Certainly, regular, frequent washing, as soon as practically possible, using the correct care code for the fabric, will minimise the problem. Dry cleaning will aggravate it.

If someone is having this problem associated with certain fibres, they should try to avoid wearing clothes made from them.

Stain resistance/removal

Finishes can be applied to fabrics to assist stain resistance and soil removal. They are not widely used and, like all finishes, are not permanent. They are more usually found on carpets and furnishing fabrics.

Stains are most easily removed by washing the garment as soon as possible after staining. The majority of food, urine and blood stains will be removed by soaking the garment overnight in a washing powder containing enzymes and then washing in the usual way.

4 Conclusion

There is no such thing as the perfect fabric. A fabric which is highly absorbent may be difficult to wash while one which is very warm may be heavy. An attractive weave may not wear well while a hard-wearing one may be non-absorbent.

The final choice of fabric is a personal one. The decision must be the wearer's and it will almost inevitably be a compromise.

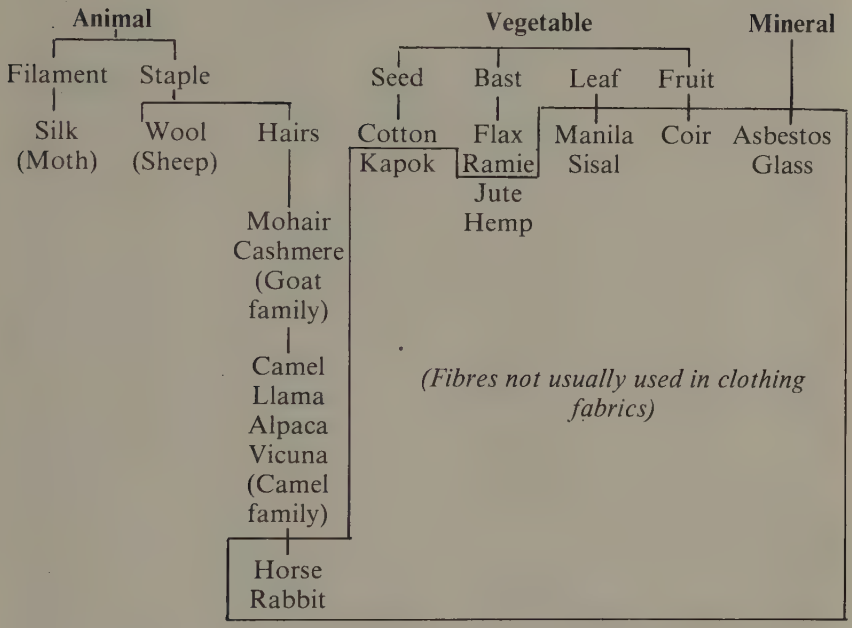
Having read this book you should be able to decide what compromises you wish to make. If you look closely at the fabric's weave, read the garment label for fibre details and the care code, and also consider style, price and size, you should be able to choose a garment which will both wear well and suit you.

This approach may narrow your choice, but you will make fewer mistakes.

Appendix 1: Types of fibres and yarns, and fabric constructions

FIBRES

TABLE OF NATURAL FIBRES



Natural fibres

Cotton – is a natural vegetable fibre with a vast range of applications. The fibre's quality depends mainly on its length. Cotton is soft, smooth, cool and very absorbent. If white, it retains its whiteness and does not scorch easily. Though lightweight, cotton is strong (stronger when wet); it also blends well with all other fibres, contributing comfort and washability.

Linen – is a natural vegetable fibre derived from flax. It has a cool feel, and is absorbent and strong (stronger when wet), smooth surfaced and easy to wash. It creases badly and is difficult to iron.

Silk – is the only natural filament fibre and there are two types, ie 'pure' and 'wild'. Warm to the touch and absorbent, silk fabrics are claimed to be warm in winter and cool in summer. The fibre blends with cotton and most man-made fibres, contributing lustre and softness. As a rule it is difficult to wash and care for.

Wool – is a natural animal fibre from sheep. Other forms of wool from different animals are Alpaca, Angora, Camelhair, Cashmere, Mohair and Vicuna. Yarns made from wool are classified as either woollen or worsted depending upon the yarn production process. Wool provides good insulation and is absorbent. It does not retain creases, requires careful washing and slow drying. It is moderately strong and is hard-wearing. Wool blends with most other fibres to contribute warmth, resilience and comfort. Wool does not flare or burn easily in most fabric weights.

TABLE OF MAN-MADE FIBRES

Regenerated (Cellulose)	Synthetic (Chemical)
Acetate	Acrylic
Triacetate	Modacrylic
Modal	Polyamide
Viscose	Polyester
	Elastane
	Polypropylene
	Chlorofibre

Man-made fibres

Regenerated cellulose

Viscose – is pleasant to handle, drapes well and has good dyeing and anti-static properties. It is also absorbent and retains whiteness. Viscose blends with all other fibres, contributing lustre, durability and dyeability.

Modal (modified viscose) – washes better than viscose, is more resistant to abrasion and keeps its shape well.

Acetate – produced both as continuous filament and staple fibre – has a particularly rich and attractive appearance, drapes well, is resilient and is easy to dye. It is also moth-proof and shrink resistant, although sensitive to heat and sunlight. Is may crease badly during washing and is difficult to iron. It can be blended with silk, cotton, wool, viscose and polyamide.

Triacetate – produced both as continuous filament and staple fibre – is similar to acetate but washes and wears better. It resists creasing, soiling, shrinking and stretching but it is not very absorbent. It is a fibre which can be permanently pleated.

What you will find on garment labels in the shops.

Synthetic fibres

All synthetic fibres are resistant to moth and mildew.

Polyamide (nylon) – the first major synthetic fibre to be produced from mineral sources – is produced both as continuous filament and staple fibre. It is extremely strong, elastic and shrink resistant. It has low moisture absorbency. Most polyamide fabrics do not burn, but melt in flaming droplets which stick to skin. Can be modified by 'bulking' and 'crimping'.

Acrylic – an acrylic yarn is usually bulky but soft and warm to touch. Lightweight, and non-irritant, it can be dyed in a wide range of fast, bright colours. It needs careful washing but dries quickly.

Modacrylic – an acrylic fibre which is modified during manufacture to give a fibre which has extremely low flammability.

Polyester – a synthetic fibre produced both as continuous filament yarn and as staple fibre – is highly resilient and therefore crease resistant. It is hard-wearing, allows permanent pleating and has very low absorbency. Blended with other fibres, it contributes resilience, and resistance to shrinking and stretching.

Elastane (lycra) – a fibre which has a very high degree of stretch and recovery. It is incorporated in fabrics to give either 'comfort stretch' or 'power stretch' and so provide support for body tissues.

Polypropylene – a non-absorbent fibre, usually used in blends, particularly in knitted sportswear. It has a tendency to pill.

Chlorofibre (thermolactyl) – usually used in thermal underwear. It has a warm feel and produces a soft bulky yarn. Derived from PVC it is inherently of low flammability which means that the fibres melt at low temperatures. It has a low melting point and will shrink badly unless washed at low temperatures. For the same reason it must not be tumble dried, dried by any artificial heat source, or ironed. It has low absorbency and is prone to static build up.

UNDERSTANDING FIBRES LISTED ON GARMENT LABELS

Generic name (usually found on garment label)	**Trade/brand name**	
Polyamide	**Nylon**	Tactel
	Polyamide	Enkalon
	Blue-C	Perlon
		Antron
Polyester	**Terylene**	Dacron
	Trevira	**Crimplene**
Acrylic	**Orlon**	**Acrilan**
	Courtelle	Dralon

Generic name	Trade/brand name	
Modacrylic	Teklan	Dynel
	Velicren	
Elastane	**Lycra**	
Polypropylene	Meraklon	
Chlorofibre (PVC)	**Thermolactyl**	
	Rhovyl	Thermovyl
Viscose	Sarille	
Modal	Viloft	

NB. Names printed in bold are found on garment labels.

Fibre mixes

In the UK, garments and fabric must carry a label stating the fibres from which they are made. An increasing number of fabrics are made from a larger number of fibres and four or more may be listed on the label. A simple assessment of the contributions made by these mixes to the final fabric can be made if the percentages of natural and synthetic fibres are added together separately.

For example, a garment labelled – Wool 60%/65%
Angora 5%
Acrylic 25%/35%
Polyamide 10%

– will have similar properties to a 65% wool and 35% acrylic jumper, ie virtually as warm as wool but less expensive and a little lighter.

If less than 5% of a fibre is used it will have very little impact on the finished fabric and is probably being used for its decorative effect. The exception is elastane – a small amount contributes significantly to stretch and recovery.

Where a percentage of 'Mixed Fibres' is stated on the label, this means that less than 3% of any one fibre is included. This is most commonly seen on coat labels, and probably indicates a poorer quality fabric.

YARNS

The fibres have to be spun into a yarn before they can be woven or knitted. The type of yarn produced will affect the fabric properties.

Staple fibre yarn

This is made from short fibres, each usually less than an inch long. It is not a strong yarn. Most natural fibres are spun into staple yarn.

Filament yarn

This is made from long filaments – each many yards long. It is a smooth, strong, yarn, and is usually made from man-made fibres.

Textured yarn

This is a filament yarn which has been processed for bulk or stretch.

Novelty yarn

This will be spun in such a way as to produce loops, curls and slubs for special effects.

FABRIC CONSTRUCTIONS

Woven

Plain weave

This is a simple over/under pattern of warp and weft. It is the commonest weave and used for shirting and most fabrics which are then printed.

Variations of a plain weave

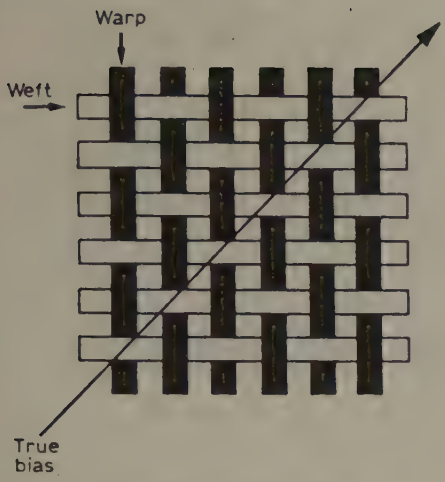
Hopsack, cord and rib, for example, are produced by varying the way the warp and weft are interlaced – in pairs or two threads in warp and one in weft or the reverse (see illustration on page 33).

Twill weave

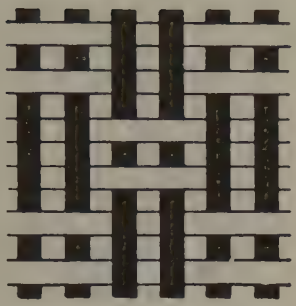
The warp and weft yarns are woven to produce a characteristic diagonal line across the fabric. It produces a compact hard-wearing yet supple fabric (see illustration on page 34). A variation on this is denim.

Satin weave

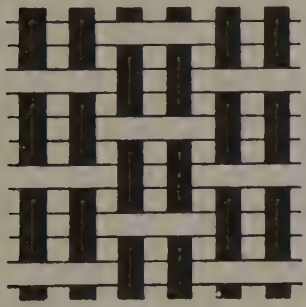
The warp yarn passes over the weft for four or more weft yarns and then under one. This type of weave gives the illusion of a solid, unbroken



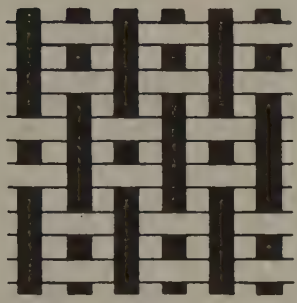
Woven fabric: plain weave



Hopsack



Cord



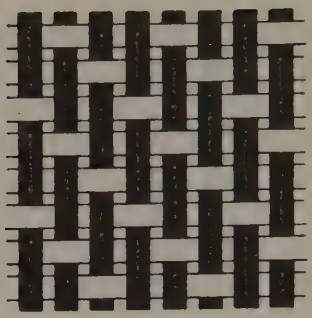
Rib

surface. The very smooth surface produces a slippery pleasant-feeling fabric but one which tends to snag and is not hard-wearing (see illustration on page 34).

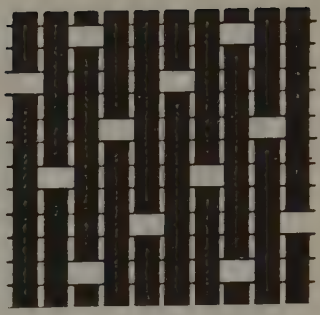
Pile fabrics

The way these fabrics, eg corduroy or velvet, wear depends on their construction.

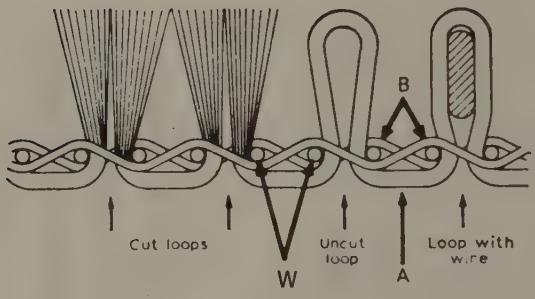
Cut pile. In velvet and corduroy the pile is cut and the threads are trapped into the fabric. The weak point in these fabrics is not the thickness of the pile but the distance between the warp yarns. These should always be checked by examining the wrong side of the fabric – the closer the warp yarns the better the fabric will wear (see illustration on page 34).



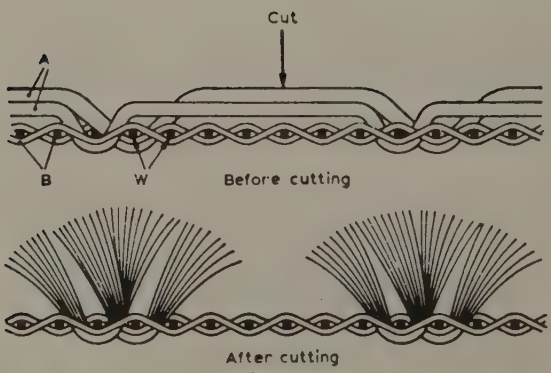
Warp, twill



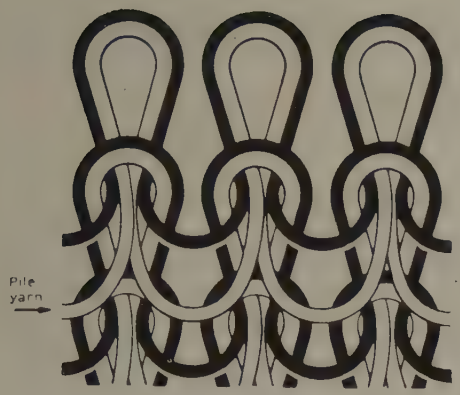
5-thread satin



Velvet



Corduroy



Knitted pile fabric.

Knitted fabric, face side.

Knitted pile. In this instance the pile is produced by knitting two yarns together but looping the pile yarn much more loosely. The resulting loop is not cut. It is commonly used for stretch velours (see illustration above).

Double cloth

Sometimes two fabrics are woven together so as to be one (reversible).

Knitted

A knitted fabric is made by interlocking loops of yarn. Knitted fabrics are inherently stretchy, and unlikely to crease or fray. The loop can either inter-lock as weft knitting, when the yarn will form horizontal rows across the fabric, or as warp knitting with vertical chains or loops lengthways (see illustration above).

To give knitted fabrics strength and prevent them 'laddering', the loops are interlocked in a variety of ways. These variations also give the fabric different textures.

Non-woven

Non-woven fabrics are made by compacting a web of fibres into sheets. The traditional non-woven fabric is felt. This is made by applying heat, moisture, pressure and milling to wool fibres causing them to bond together. The resulting fabric is not strong – hats are the only garments commonly made from felt.

Since the 1950s, chemicals have been used to bond polyester, producing a washable non-woven interfacing.

Appendix II: Useful addresses

Organisations supplying advice on textiles and/or laundering

British Man-Made Fibres Federation, 24 Buckingham Gate, London SW1E 6LB (tel: 01 828 0744).

Fabric Care Research Association, Forest House Laboratories, Knaresborough Road, Harrogate HG2 7LZ (tel: 0423 883201).

DHSS Directorate of Works Operation, 1-2 Laundry Engineers, Euston Towers, Euston Road, London NW1 (tel: 01 388 1188).

DHSS Supplies Division, Textile Technologist, 14 Russell Square, London WC1B 5EP (tel: 01 636 6811).

International Wool Secretariat, 6-7 Carlton Gardens, London SW1Y 5AE (tel: 01 930 7300).

Shirley Institute, The Cotton, Silk and Man-Made Fibres Research Association, Didsbury Manchester M20 8RX (tel: 061 445 8141).

The Textile Institute, 10 Blackfriars Street, Manchester M3 5DR (tel: 061 834 8457).

Appendix III: Clothing Advisory Panel

Lady Hamilton CBE MA, *Chairman, Disabled Living Foundation*
Mrs Helen Cook, *Fashion and Special Projects Executive, TV Times*
Miss E Fanshawe OBE DipCOT, *Director, Disabled Living Foundation*
Miss M Gilbertson MCSP, *Chief Executive Officer, Association for Spina Bifida and Hydrocephalus*
R W J Godden OBE, *Retired Director, The Clothing and Footwear Institute*
Mrs P Gumery, *Procurement Directorate, DHSS*
Mrs A Hearne, *Paediatric Clothing Adviser, TRAIDS (Trent Regional Advice and Information Centre)*
Mrs V King MSc, *formerly WRVS Clothing Adviser*
Mrs M S T Langton MSc, *Chief Technical Officer, British Standards Institution*
John Leung BA DipHE SRN RMN NDN RCNT DNT RNT, *Education Officer (District Nurse Education and Training), English National Board for Nursing, Midwifery and Health Visiting*
Miss P Macartney DipCOT, *Clinical Tutor, Mary Marlborough Lodge*
Mrs C McCallion, *Textile Technologist, DHSS*
Mrs E Mulligan CText ATI, *Retired, formerly the Textile Teacher's Centre*
Mrs B Naylor, *Dress designer, authoress, lecturer*
A K Shepherd, *Staff Support Officer, Leavesden Hospital*
Dr M C Stewart MB BS D(Obst) RCOG, *formerly Principal Medical Officer (Adult Health), Basingstoke General Hospital*
Mrs L Thomas SRN RCN, *Adviser for Geriatric Nursing, RCN Association of Nursing Practice, Royal College of Nursing*
Mrs N Thornton, *Project Director, Fashion Services for the Disabled, Shipley, Yorkshire*
Mrs E M Turnbull MCSP DipPE, *Retired DLF Clothing Adviser*
Mrs Susan Wilkin, *Assistant Textile Technologist DHSS*

Observer
Miss B Jarman, *Nursing Officer, DHSS*

DLF Advisory Service Staff
Mrs V H Jenkins MCSP, *Adviser*
Mrs R Ruston SRN SCM HV, *Assistant Adviser*

BRUNEL UNIVERSITY LIBRARY
RUNNYMEDE CAMPUS
TELEPHONE: 873-1341 Ext 221

DATE DUE

10. 06. 94

-7. JUL. 1995

23. JAN 1995

WITHDRAWN

17 JUN 2000

XB 2287529 8

Printed by Drogher Press, Unit 4 Airfield Way, Christchurch, Dorset, England.

BRUNEL UNIVERSITY LIBRARY
Bannerman Centre,
Uxbridge, Middlesex, UB8 3PH

To renew:
Web: www.brunel.ac.uk/renew
Tel: 01895 266141

Anyone involved in making clothes will know the fundamental importance of choosing the right fabric; for someone with disabilities, the right fabric may make the difference between clothing being an asset or a hindrance. This booklet - a mine of practical information on how the fibres, yarn, weave and finish affect a fabric - will enable the reader to make an informed choice when faced with the daunting prospect of a shop full of fabrics. Whatever the future wearer's disabilities - which may demand a fabric that is particularly durable, absorbent, easy to wash or one that will facilitate wheelchair transfers - this book will prove an invaluable guide. The appendices contain details of the types of fibres and yarns, explain how fibres are constructed, and list the addresses of specialist groups from whom further advice can be obtained. Cartoons by Jean de Lemos add a touch of humour to the text.

The booklet is written for all those, whether or not they have any previous knowledge of textiles, who are interested, either personally or professionally, in clothes for people with disabilities.

Ginny Jenkins, MCSP, since qualifying as a physiotherapist, worked with elderly people for 20 years in geriatric units, the community and in psychiatric hospitals, before joining the DLF as the Adviser on Clothing and Footwear. She has always had a great interest in clothes and has considerable experience in the technical side of garment making. Jane Lamb, PhD, Associate Professor of Clothing and Textiles, University of Delaware, USA, has throughout her career been particularly interested in the clothing needs of people with disabilities.

ISBN 0 901908 49 5

KI-156-684

Published by the
Disabled Living Foundation
380-384 Harrow Road
London W9 2HU